REMARKS

Applicant thanks the Examiner for initialing the references listed on the PTO-1449 forms submitted with the Information Disclosure Statement filed on January 24, 2000, thereby confirming that the listed references have been considered.

The Examiner objects to the Abstract as exceeding the 150-word limit. Applicants herein amend the Abstract, and no new matter has been added. Applicants respectfully submit that the Examiner's objection to the Abstract has been overcome.

Claims 1-8 have been examined on their merits.

Applicants herein editorially amend claims 5 and 6 to correct grammatical errors and punctuation errors. The amendments to claims 5 and 6 were made for reasons of precision of language, and were not made for reasons of patentability.

Claims 1-8 are all the claims presently pending in the application.

1.   Claims 6-8 stand rejected under 35 U.S.C. § 101 as being allegedly directed to non-statutory subject matter. Applicants traverse the rejection for at least the reasons discussed below.

The Examiner expressly acknowledges that claims 6-8 recite computer program products. The Examiner asserts that the code does not do anything *per se* until a computer executes the code. The Examiner further asserts, through an example, that claims 6-8 need to recite that the computer code embodied on a computer readable medium is executed in order to be considered statutory within the ambit of 35 U.S.C. § 101.

MPEP § 2106(a) states that "... a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory." *See* MPEP § 2106(a), 2nd para. *In re Beauregard*, 35 U.S.P.Q.2d 1385 (Fed. Cir. 1995) held that "computer programs embodied in a tangible medium, such as floppy diskettes, are patentable subject matter under 35 U.S.C. Section 101 and must be examined under 35 U.S.C. Sections 102 and 103." Each of claims 6, 7 and 8 recites a computer readable medium that bears computer code embodying the claimed invention. Applicants are not aware of, nor has the Examiner cited, any relevant Federal Circuit caselaw, Title 37 section or MPEP section that requires a computer product claim to contain language that the computer product must be executed in order to be considered statutory within the ambit of 35 U.S.C. § 101. Applicants respectfully request that the 35 U.S.C. § 101 rejection of claims 6-8 be withdrawn.

2.   Claims 1-2 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kageshima (U.S. Patent No. 6,096,089) in view of Catthoor *et al.* (U.S. Patent No. 6,223,274). Applicants traverse the rejection of claims 1 and 2 at least for the reasons discussed below.

The initial burden of establishing that a claimed invention is *prima facie* obvious rests on the USPTO. *In re Piasecki*, 745 F.2d 1468, 1472 (Fed. Cir. 1984). To make its *prima facie* case of obviousness, the USPTO must satisfy three requirements:

a)   The prior art relied upon, coupled with the knowledge generally available in the art at

the time of the invention, must contain some suggestion or incentive that would have

motivated to artisan to modify a reference or to combine references. *In re Fine*, 837

F.2d 1071, 1074 (Fed. Cir. 1988).

b) The proposed modification of the prior art must have had a reasonable expectation of

success, and that determined from the vantage point of the artisan at the time the

invention was made. *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1209 (Fed.

Cir. 1991).

c) The prior art reference or combination of references must teach or suggest all the

limitations of the claims. *In re Vaeck*, 20 U.S.P.Q.2d 1438, 1442 (Fed. Cir. 1991); *In

re Wilson*, 424 F.2d 1382, 1385 (CCPA 1970).

The motivation, suggestion or teaching may come explicitly from statements in the prior

art, the knowledge of one of ordinary skill in the art, or, the nature of a problem to be solved. *In

re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999). Alternatively, the motivation may be implicit

from the prior art as a whole, rather than expressly stated. *Id.* Regardless if the USPTO relies on

an express or an implicit showing of motivation, the USPTO is obligated to provide particular

findings related to its conclusion, and those findings must be clear and particular. *Id.* A broad

conclusionary statement, standing alone without support, is not "evidence." *Id.; see also, In re

Zurko*, 258 F.3d 1379, 1386 (Fed. Cir. 2001).

In addition, a rejection cannot be predicated on the mere identification of individual

components of claimed limitations. *In re Kotzab*, 217 F.3d 1365, 1371 (Fed. Cir. 2000). Rather,

particular findings must be made as to the reason the skilled artisan, with no knowledge of the

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claimed invention, would have selected these components for combination in the manner claimed. *Id.*

The combination of Kageshima and Catthoor *et al.* does not teach or suggest a determination of whether an initially defined instruction set has data dependencies or correlation between instructions, and thence modifying the defined instruction set based on the determination, as recited in claims 1 and 2. Kageshima discloses gate-level simulations, but it fails to disclose that the simulated instruction set is refined based upon data dependencies or correlation between instructions, as recited in claims 1 and 2. *See* col. 1, line 53 to col. 2, line 8 of Kageshima. Catthoor *et al.* disclose a parallel processing system that uses a flexible mix of hardware and software processors. *See, e.g.,* col. 3, lines 49-53 of Catthoor *et al.* Neither of the references, either alone or in combination, discloses the refinement of an initially defined instruction set based on the presence of data dependencies or correlation between instructions, as recited in claims 1 and 2. Thus, Applicants believe that the Examiner cannot fulfill the "all limitations" prong of a *prima facie* case of obviousness, as required by *In re Vaeck.*

Since neither Kageshima nor Catthoor *et al.* disclose the refinement of an initially defined instruction set based on the presence of data dependencies or correlation between instructions, Applicants believe that one of ordinary skill in the art would not be motivated to combine the references. *In re Dembiczak* and *In re Zurko* require the Examiner to provide particularized facts on the record as to why one of skill would be motivated to combine the two references. Without a motivation to combine, a rejection based on a *prima facie* case of obviousness is improper. *In re Rouffet,* 149 F.3d 1350, 1357 (Fed. Cir. 1998)). The level of skill in the art cannot be relied

upon to provide the suggestion to combine references. *Al-Site Corp. v. VSI Int'l Inc.*, 174 F.3d 1308 (Fed. Cir. 1999). The Examiner must make specific factual findings with respect to the motivation to combine references. *In re Lee*, 277 F.3d 1338, 1342-44 (Fed. Cir. 2002). Although the Examiner provides a motivation analysis with respect to the development of large ASICs with power consumption problems, both Kageshima and Catthoor *et al.* lack any teaching about the desirability of refining of an initially defined instruction set based on the presence of data dependencies or correlation between instructions. Thus, Applicants believe that the Examiner cannot fulfill the motivation prong of a *prima facie* case of obviousness, as required by *In re Dembiczak* and *In re Zurko*.

Based on the foregoing reasons, Applicants believe that the combination of Kageshima and Catthoor *et al.* fails to disclose all of the claimed elements as arranged in claims 1 and 2. Therefore, the combination of Kageshima and Catthoor *et al.* clearly cannot render the present invention obvious as recited in claims 1 and 2. Thus, Applicants believe that claims 1 and 2 are allowable, and respectfully request that the Examiner withdraw the § 103(a) rejection of claims 1 and 2.

3.   Claims 3-5 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kageshima in view of Catthoor *et al.*, and in further view of Dean *et al.* (U.S. Patent No. 6,397,170). Applicants traverse the rejection of claims 3-5 at least for the reasons discussed below.

The Examiner acknowledges that the combination of Kageshima and Catthoor *et al.* fails to teach or suggest disclosing toggle counts in a power estimation. The Examiner alleges that Dean *et al.* supplies the necessary disclosure to overcome the acknowledged deficiencies in the combination of Kageshima and Catthoor *et al.*

The combination of Kageshima, Catthoor *et al.* and Dean *et al.* does not teach or suggest a determination of whether an initially defined instruction set has data dependencies or correlation between instructions, and thence modifying the defined instruction set based on the determination, as recited in claim 2 and included in claim 3 via dependency. None of the references, either alone or in combination, discloses the refinement of an initially defined instruction set based on the presence of data dependencies or correlation between instructions, as recited in claim 2 and included in claim 3. Dean *et al.* disclose using weighted net toggle information, but there is no teaching or suggestion of modifying an initially defined instruction set based on a determination of data dependency or instruction correlation. Thus, Applicants believe that the Examiner cannot fulfill the "all limitations" prong of a *prima facie* case of obviousness for claim 3, as required by *In re Vaeck.*

Since neither Kageshima, Catthoor *et al.* or Dean *et al.* disclose the refinement of an initially defined instruction set based on the presence of data dependencies or correlation between instructions, Applicants believe that one of ordinary skill in the art would not be motivated to combine the references. Although the Examiner provides a motivation analysis with respect to the development of large ASICs with power consumption problems, Kageshima, Catthoor *et al.* and Dean *et al.* lack any teaching about the desirability of refining of an initially

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defined instruction set based on the presence of data dependencies or correlation between instructions. Thus, Applicants believe that the Examiner cannot fulfill the motivation prong of a *prima facie* case of obviousness, as required by *In re Dembiczak* and *In re Zurko*.

Based on the foregoing reasons, Applicants believe that the combination of Kageshima, Catthoor *et al.* and Dean *et al.* fails to disclose all of the claimed elements as arranged in claim 3. Therefore, the combination of Kageshima, Catthoor *et al.* and Dean *et al.* clearly cannot render the present invention obvious as recited in claim 3. Thus, Applicants believe that claim 3 is allowable, and respectfully request that the Examiner withdraw the § 103(a) rejection of claim 3.

With respect to claim 4, the combination of Kageshima, Catthoor *et al.* and Dean *et al.* does not teach or suggest a determination of whether an initially defined instruction set has data dependencies or correlation between instructions, and thence modifying the defined instruction set based on the determination. None of the references, either alone or in combination, discloses the refinement of an initially defined instruction set based on the presence of data dependencies or correlation between instructions. As discussed above, Dean *et al.* disclose using weighted net toggle information, but there is no teaching or suggestion of modifying an initially defined instruction set based on a determination of data dependency or instruction correlation. Thus, Applicants believe that the Examiner cannot fulfill the "all limitations" prong of a *prima facie* case of obviousness for claim 4, as required by *In re Vaeck*.

Since neither Kageshima, Catthoor *et al.* or Dean *et al.* disclose the refinement of an initially defined instruction set based on the presence of data dependencies or correlation between instructions, Applicants believe that one of ordinary skill in the art would not be

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motivated to combine the references. Although the Examiner provides a motivation analysis with respect to the development of large ASICs with power consumption problems, Kageshima, Catthoor *et al.* and Dean *et al.* lack any teaching about the desirability of refining of an initially defined instruction set based on the presence of data dependencies or correlation between instructions. Thus, Applicants believe that the Examiner cannot fulfill the motivation prong of a *prima facie* case of obviousness, as required by *In re Dembiczak* and *In re Zurko*.

Based on the foregoing reasons, Applicants believe that the combination of Kageshima, Catthoor *et al.* and Dean *et al.* fails to disclose all of the claimed elements as arranged in claim 4. Therefore, the combination of Kageshima, Catthoor *et al.* and Dean *et al.* clearly cannot render the present invention obvious as recited in claim 4. Thus, Applicants respectfully submit that claim 4 is allowable, and further submit that claim 5 is allowable as well, at least by virtue of its dependency from claim 4. Applicants respectfully request that the Examiner withdraw the § 103(a) rejection of claims 4 and 5.

4.   Claims 6-8 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Loucks *et al.* (U.S. Patent No. 5,828,576) in view of Catthoor *et al.* Applicants traverse the rejection of claims 6-8 at least for the reasons discussed below.

With respect to claim 6, the combination of Loucks *et al.* and Dean *et al.* fails to teach or suggest at least executable code portions for adding idle energy to an energy accumulator, for calculating consumed power and for adding an energy value to an energy accumulator. None of the portions of Loucks *et al.* and Dean *et al.,* cited by the Examiner, teach or suggest the above-

listed recitations of claim 6. For example, the Examiner's citation from Loucks *et al.* discusses

the placement and operation of monitoring modules, and the citation from Dean *et al.* discloses

the use of hardware and software processors for use in a parallel computing system. In the

November 6, 2003 Office Action, the Examiner has not indicated how the subject matter of

claim 6 is even remotely obvious over the combination of Loucks *et al.* and Dean *et al.* The

Examiner has not shown how the combination of Loucks *et al.* and Dean *et al.* allegedly teaches

or suggests at least executable code portions for adding idle energy to an energy accumulator, for

calculating consumed power and for adding an energy value to an energy accumulator.

Thus, Applicants believe that the Examiner cannot fulfill the "all limitations" prong of a *prima*

facie case of obviousness for claim 6, as required by *In re Vaeck*.

Since neither Loucks *et al.* nor Dean *et al.* teaches or suggests at least executable code

portions for adding idle energy to an energy accumulator, for calculating consumed power and

for adding an energy value to an energy accumulator, Applicants believe that one of ordinary

skill in the art would not be motivated to combine the references. Although the Examiner

provides a motivation analysis with respect to the development of large ASICs with power

consumption problems, both Loucks *et al.* and Dean *et al.* lack any teaching about the

desirability of executable code portions for adding idle energy to an energy accumulator, for

calculating consumed power and for adding an energy value to an energy accumulator. Thus,

Applicants believe that the Examiner cannot fulfill the motivation prong of a *prima facie* case of

obviousness, as required by *In re Dembiczak* and *In re Zurko*.

Based on the foregoing reasons, Applicants believe that the combination of Loucks *et al.* and Dean *et al.* fails to disclose all of the claimed elements as arranged in claim 6. Therefore, the combination of Loucks *et al.* and Dean *et al.* clearly cannot render the present invention obvious as recited in claim 6. Thus, Applicants respectfully submit that claim 6 is allowable, and respectfully request that the Examiner withdraw the § 103(a) rejection of claim 6.

With respect to claims 7 and 8, the combination of Loucks *et al.* and Dean *et al.* does not teach or suggest a determination of whether an initially defined instruction set has data dependencies or correlation between instructions, and thence modifying the defined instruction set based on the determination. None of the references, either alone or in combination, discloses the refinement of an initially defined instruction set based on the presence of data dependencies or correlation between instructions. Loucks *et al.* disclose a power monitoring apparatus for high voltage electric power that uses an object-oriented architecture. As discussed above, Dean *et al.* disclose using weighted net toggle information. Thus, Applicants believe that the Examiner cannot fulfill the "all limitations" prong of a *prima facie* case of obviousness for claims 7 and 8, as required by *In re Vaeck*.

Since neither Loucks *et al.* nor Dean *et al.* disclose the refinement of an initially defined instruction set based on the presence of data dependencies or correlation between instructions, Applicants believe that one of ordinary skill in the art would not be motivated to combine the references. Although the Examiner provides a motivation analysis with respect to the development of large ASICs with power consumption problems, both Loucks *et al.* and Dean *et al.* lack any teaching about the desirability of refining of an initially defined instruction set based

on the presence of data dependencies or correlation between instructions. Thus, Applicants

believe that the Examiner cannot fulfill the motivation prong of a *prima facie* case of

obviousness, as required by *In re Dembiczak* and *In re Zurko*.

Based on the foregoing reasons, Applicants believe that the combination of Loucks *et al.*

and Dean *et al.* fails to disclose all of the claimed elements as arranged in claims 7 and 8.

Therefore, the combination of Loucks *et al.* and Dean *et al.* clearly cannot render the present

invention obvious as recited in claims 7 and 8. Thus, Applicants respectfully submit that claims

7 and 8 are allowable, and respectfully request that the Examiner withdraw the § 103(a) rejection

of claims 7 and 8.

In view of the above, reconsideration and allowance of this application are now believed

to be in order, and such actions are hereby solicited. If any points remain in issue which the

Examiner feels may be best resolved through a personal or telephone interview, the Examiner is

kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
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The USPTO is directed and authorized to charge all required fees, except for the Issue

Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any

overpayments to said Deposit Account.

Respectfully submitted,

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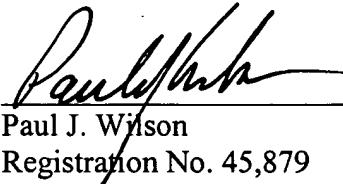
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